

# Guidelines

## for Instrumentation-Related Usage Costs and Core Facilities



Disclaimer: The English translation of this document is provided for informational purposes. In the event of a discrepancy between the English and the German versions, the German text takes precedence.

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## I General Information on Usage Costs and Their Accounting

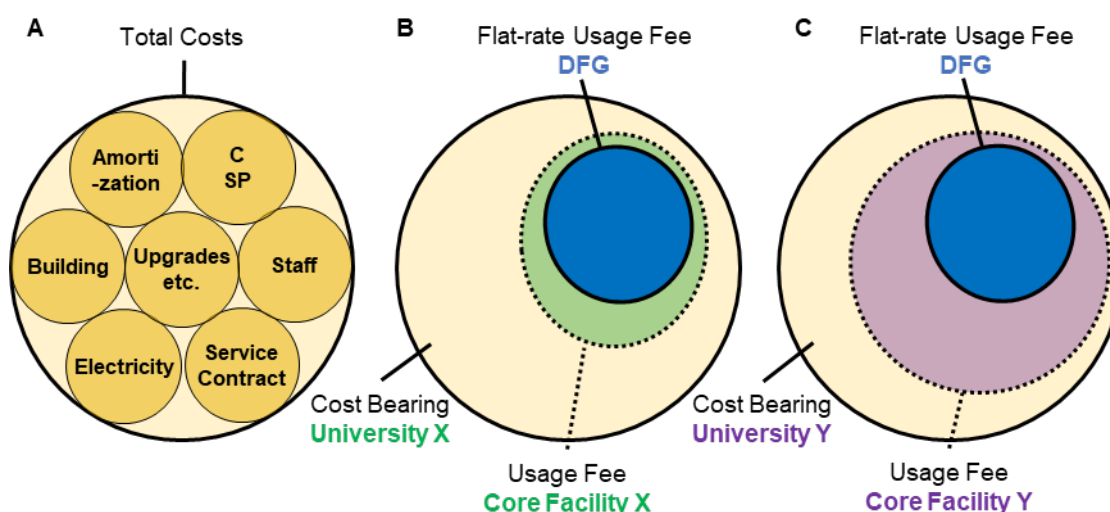
Through its funding programmes, the DFG is able to finance usage costs for scientific instrumentation and service facilities/core facilities insofar as these meet an additional need for a specific project. This is preferably done in the form of fixed **usage-cost rates**, the level of which is determined by the service facility or core facility. For technologies or services that are used particularly frequently, the DFG has set upper limits for eligible usage costs (see Section IV). In all other cases, usage costs must be itemised in the statement of costs so that it is clear that only those portions recognised as project-specific costs are charged to the DFG.

The flat-rate usage fees specified by the DFG **define upper limits up to** which internal usage costs eligible for funding can be claimed in connection with individual or collaborative projects. Research institutions must ensure that their service facilities or core facilities and instrumentation providers determine the actual operating costs, thereby enabling a transparent and accounting-compliant allocation of costs to users.

It should be noted that **internal usage costs eligible for DFG funding** only cover **project-specific additional costs** and may therefore differ from the usage and service costs set by core facilities or instrumentation providers. As shown in Figure 1, the varying degrees to which research institutions contribute to the running costs of a core facility result in **deviations in the amount of the respective usage costs**. In consequence, also deviations of varying degrees between the usage costs charged by a core facility and the upper limit for flat-rate usage fees as defined by the DFG become obvious.

**Most of the full costs** of use, in particular those covering basic operation of an item of instrumentation or service such as personnel (e.g. laser protection, general administration, cleaning), service and maintenance contracts, depreciation and reinvestment, ongoing expenses for buildings and maintenance, etc., must be borne by the scientific research institution and cannot be financed with DFG funds.

When **calculating the costs eligible for funding**, it should also be taken into account that expenses required for general upkeep of the functionality of an item of instrumentation or a service cannot be included in the usage costs eligible for funding. If, for example, an item of instrumentation permanently requires a coolant, e.g. for cooling a magnet, this coolant cannot be included in the costs eligible for funding (not even proportionally during actual use). If cooling only takes place during the (project-specific) measuring procedure itself, the costs for the coolant are eligible. The same applies to project-specific wear-and-tear parts such as those required for maintaining a vacuum, etc.



**Figure 1** Usage costs eligible for funding. In the example shown, University X (B) covers a much higher share of the full costs than University Y (C). For this reason, the usage costs Core Facility X charges to its users (B) are significantly lower than those charged by Core Facility Y (C). The usage costs of X are therefore closer to the upper limit defined by the DFG in terms of project-specific usage costs eligible for funding. C, Consumables; SP, Spare Parts.

Unless otherwise stated, the following **usage models** apply:

- Service operation: The staff of the core facility carry out the work.
- Application operation: Users work mainly independently with the support of core facility staff.

DFG flat-rate usage fees contribute to the proportional financing of personnel costs at the core facility. These funds are intended to compensate for the additional expenditure incurred in providing services and instrumentation and project-related support for research projects. Services offered by the core facility go beyond straightforward training and ensuring measurement readiness: they also include aspects of experiment planning, sample preparation and data evaluation. Staff time for purely maintaining the operating status (maintenance, administration, etc.) is therefore not eligible for funding; staff time for project-specific service is eligible.

**Exclusion of duplicate funding:** Costs that are already covered by third-party funding or a commitment from the research institution must not be included in the usage costs! If, for example, a staff position at a core facility is applied for as part of a collaborative proposal (e.g. via a Z project in a CRC) and additional staff positions have been approved by the research institution as a contribution to basic resources, these staff positions may not be included in the usage costs.

Usage costs can only be included in the funding proposal and claimed as an **internal service** under DFG funding procedures if core facilities have adopted terms of use (see also the information in the section “DFG requirements for terms of use at core facilities”).

Even in the case of instrumentation operated **outside of core facilities** and made available to other persons subject to usage fees, the provider must adopt terms of use.

## II DFG Requirements for Terms of Use at Core Facilities

In order for DFG funds to be used to cover **the use of internal core facilities** or decentralised instrumentation (usage costs), core facilities or operators must adopt terms of use that are visible on the website or intranet of the university or research institution (including details of a contact person). If the services are also offered to external users (outside the institution itself), registration in the DFG database RIsources is recommended: <http://risources.dfg.de/>

The following **fundamental aspects** should be regarded as minimum points for inclusion in terms of use:

- Binding nature of the terms of use for all users.
- Details of services (instrumentation, service, support) and target groups.
- Description of the technology/instrumentation/resource available and its performance class.
- Description of data processing, transfer and archiving.
- Description of the requirements/necessary preparations for use<sup>1</sup>.
- Definition of responsibilities (e.g. in connection with safety regulations).
- Details of both technical and scientific contact persons.
- Description of the system for usage time allocation/booking.
- Details of the decision criteria and procedures applied in the allocation of usage time in the event of overbooking.
- Differentiation of usage costs according to affiliation (e.g. internal/external); criteria must be applied uniformly within a group. A “price list” should form part of the terms of use (if necessary as an attachment).
- Usage costs should be itemised, not least so that it is clear which portions can be applied for or recognised by the DFG as project-specific costs.

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<sup>1</sup> e.g. sample preparation standards, statement by ethics committee, proof of principle, etc.

- It must be clear which persons or bodies are responsible for ensuring compliance with the terms of use and when the latter were drawn up and adopted.
- Regulation of exploitation rights (IP: intellectual property).
- Provision governing the recognition of the core facility's contributions in publications (e.g. acknowledgements).

Further notes:

- A core facility in the above sense does not necessarily have to be of a certain size or contain a minimum number of items of instrumentation.
- It is possible to allocate only part of the usage time of an item of instrumentation as a (central) service; only this part must then be regulated by the terms of use.

### III Notes on Applying for Usage Costs

In general, the justification of estimated flat-rate usage fees and costs in a DFG proposal must be transparent and verifiable (e.g. type of service, costs per measuring unit, number of measuring units, performance class of the instrumentation used, etc.). In the case of **usage costs exceeding €10,000**, a **cost estimate** by the core facility or operator, itemised in accordance with the criteria mentioned (cost per unit of measurement, etc.), must be submitted as a supplementary document to the proposal. This document must also show that the applicant has consulted the core facility and that the intended use of services is feasible in the form and scope described in the proposal.

Usage costs must be recorded under "Other Costs" in the category of direct project costs and listed in the proposal (cf. the notes on the Basic Module – DFG form 52.01<sup>2</sup>).

The DFG contact person for general questions relating to usage costs is:

Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 228 885-2476, e-mail: [gunter.merdes@dfg.de](mailto:gunter.merdes@dfg.de).

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<sup>2</sup> [www.dfg.de/formulare/52\\_01](http://www.dfg.de/formulare/52_01)

## IV Usage Flat Rates for Special Instrumentation Categories

### 1 Flow cytometry

For the use of flow cytometry instrumentation operated at core facilities, usage costs may be applied for according to the instrumentation classes listed below.

- Instrumentation class I: Cell analysers with up to 3 lasers
- Instrumentation class II: Cell analysers with more than 3 lasers
- Instrumentation class III: Cell sorter; imaging flow cytometer

	Application operation €/hour	Service operation €/hour
Instrumentation class I	Up to 15.00 max.	Up to 55.00 max. (only possible at < 40 hrs. use)
Instrumentation class II	Up to 25.00 max.	Up to 65.00 max. (only possible at < 40 hrs. use)
Instrumentation class III	Up to 40.00 max.	Up to 80.00 max.

The costs of preparation and follow-up are already included as a lump sum in these upper limits for flat rate user fees. If the instrumentation is used for several hours, the rate should therefore be reduced since this means there is a relative decrease in the preparation and follow-up required.

The DFG contact person for questions regarding usage costs for instrumentation in flow cytometry is Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2476, e-mail: [gunter.merdes@dfg.de](mailto:gunter.merdes@dfg.de).

## 2 Electron microscopy

For the use of electron microscopes operated at core facilities, usage costs may be applied for according to the instrumentation classes and usage models listed below.

With regard to project-specific requirements in terms of preparation, supervision and evaluation, the following instrumentation classes apply:

- Instrumentation class I: Scanning electron microscope.
- Instrumentation class II: Focussed ion beam, transmission electron microscope without aberration correction, microprobe.
- Instrumentation class III: Cryogenic transmission electron microscope, high-end transmission electron microscope with aberration correction.

	Application operation €/hour	Service operation €/hour
Instrumentation class I (REM)	Up to 40.00 max.	Up to 80.00 max.
Instrumentation class II (FIB, TEM, microprobe)	Up to 80.00 max.	Up to 140.00 max.
Instrumentation class III (Cryo-TEM, High End TEM)	Up to 120.00 max.	Up to 200.00 max.

The only hours eligible for funding are those spent at the instrumentation conducting investigation work. However, the funds budgeted for this are intended to cover the usual project-specific expenses for preparatory work and sample preparation as well as evaluation.

The contact person for questions regarding electron microscopy costs at the DFG is Dr. Gunter Merdes, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2476, e-mail: [gunter.merdes@dfg.de](mailto:gunter.merdes@dfg.de).



### 3 Light microscopy

Usage costs may be budgeted for light microscopes made available under terms of use. A distinction is made between the following classes of instrumentation and modes of operation:

- Instrumentation class I: Simple systems, e.g. reflected light/transmitted light/wide field microscopes
- Instrumentation class II: Medium complexity, e.g. laser scanning/spinning disc systems
- Instrumentation class III: Elaborate high-performance systems

	Application operation €/hour	Service operation €/hour
Instrumentation class I	Up to 15.00 max.	Up to 40.00 max.
Instrumentation class II	Up to 25.00 max.	Up to 60.00 max.
Instrumentation class III	Up to 50.00 max.	Up to 100.00 max.

The hours are calculated based on the pure instrument time spent on measurements. The estimated flat-rate usage fees also cover the usual project-specific effort required for preparatory work and sample preparation as well as evaluation.

The DFG contact person for questions regarding light microscopy is Dr. Michel Royeck, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2976, e-mail: [michael.royeck@dfg.de](mailto:michael.royeck@dfg.de).

#### **4 Magnetic resonance imaging (MRI)**

For the use of MRI scanners, up to a maximum of €150.00 per hour of measurement time is eligible for funding. This also applies to measurements on animals. For clinical resp. human MRI at a field strength of 7 Tesla or more, this rate increases to €375.00 per hour. For small animal MRI, the basic rate of €150.00 per hour applies, even at higher field strengths.

The DFG contact person for questions regarding MRI costs is Dr. Christian Renner, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2324, e-mail: [christian.renner@dfg.de](mailto:christian.renner@dfg.de).

#### **5 Mass spectrometry**

For the use of mass spectrometers operated at core facilities and for the use of instrumentation which is operated outside core facilities and for which there are terms of use in accordance with DFG requirements, up to a maximum of €40 per hour is eligible for funding. The only hours eligible for funding are those spent at the instrumentation conducting investigation work. This covers the usual cost of project-specific expenses for preparation and follow-up. For additional scientific support required (e.g. particularly complex sample preparation or further bioinformatic analysis of the measurement results), a flat rate of €30 to 60 per hour can be added in justified cases.

The DFG contact person for questions regarding usage costs for mass spectrometers is Dr. Manfred Mürtz, Scientific Instrumentation and Information Technology, Tel. +49 (0) 228/885-2432, e-mail: [manfred.muertz@dfg.de](mailto:manfred.muertz@dfg.de).

## 6 NMR spectroscopy

For the use of NMR spectrometers in automated routine operation at core facilities, up to a maximum of €10 per hour is eligible for funding. For medium field strengths up to 400 MHz, €5 per hour is appropriate; the maximum rate of €10 applies to high field strengths of 500 MHz and over. For manual measurements and assistance with the evaluation, the flat rate is increased by €10.00 (per hour of measurement time).

In the case of complex NMR experiments in research, the supervision or implementation of the NMR experimental part is significantly more complex and requires scientific support in preparation, implementation and data processing. Accordingly, hourly rates of up to max. €40.00 (medium field strength, 500 MHz) or max. €80.00 (very high field strength, from 850 MHz) can be applied here. For NMR measurements lasting several days the rate should be reduced since this means there is a relative decrease in the preparation and follow-up required. For a total measurement time of 20 days, no more than half the hourly rate should be applied.

In all cases, the only hours eligible for funding are those required for carrying out NMR measurements.

The DFG contact person for questions regarding NMR costs is Dr. Christian Renner, Scientific Instrumentation and Information Technology, Tel. +49 (0)228/885-2324, e-mail: [christian.renner@dfg.de](mailto:christian.renner@dfg.de).

## 7 Examples of non-eligible usage costs

- Costs for computing time at university computing centres are not eligible for DFG funding.
- Usage costs purely for access to clean rooms cannot generally be financed from DFG funds. Costs for the procurement of consumables and use of instrumentation in the clean room are reimbursable in the normal way.